
AWS
re:Invent
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PRT236

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Deep dive on IBM software and SaaS solutions on AWS

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Customer expectations for enterprise software

DEPLOY ON AWS

Powered by AWS Infrastructure

- Red Hat OpenShift Service on AWS (ROSA)
- Red Hat OpenShift Cloud Platform (OCP)
- Amazon Elastic Compute Cloud (EC2)

INTEGRATE WITH AWS

Integrated with AWS Services

- IBM Cloud Pak for Data with Amazon RedShift
- IBM API Connect as a Service with AWS Lambda
- IBM Maximo Application Suite (MAS) with Amazon MSK

BUILT FOR AWS

Built with AWS Services

- Software and SaaS built for Red Hat OpenShift Service on AWS (ROSA)
- IBM Security QRadar with AWS Security Hub
- IBM Guardium Data Protection with Amazon Aurora

MANAGED ON AWS

Managed on AWS Infrastructure

- Software as a Service fully managed by IBM
- Managed Services from IBM Expert Labs
- Managed products from Ecosystem Partners

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IBM's hybrid cloud and AI platform approach

IBM Consulting

Business Transformation • Technology Consulting • Application Operations

System Integrator Partners

IBM Software

IBM Cloud Paks

Automation • Data & AI • Security • Transaction Processing

Software and SaaS Partners

Red Hat Hybrid Cloud Platform

Development, Security and Operational Services

OpenShift • Red Hat Enterprise Linux • Ansible Automation Platform

IBM Infrastructure

Public Clouds

AWS

Enterprise Infrastructure

Edge

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Red Hat OpenShift Service on AWS (ROSA)

AWS SERVICE

FULLY MANAGED RED HAT OPENSHIFT SERVICE ON AWS, JOINTLY MANAGED AND SUPPORTED BY BOTH RED HAT AND AWS



Reduce operational complexity

Fully managed OpenShift service backed by enterprise class SLA enables customers to focus on applications, not infrastructure



Empower developers to innovate

Quickly build and deploy applications by launching OpenShift through the AWS console



Flexible consumption-based pricing

Scale according to your business needs and pay as you go with flexible pricing, including hourly billing

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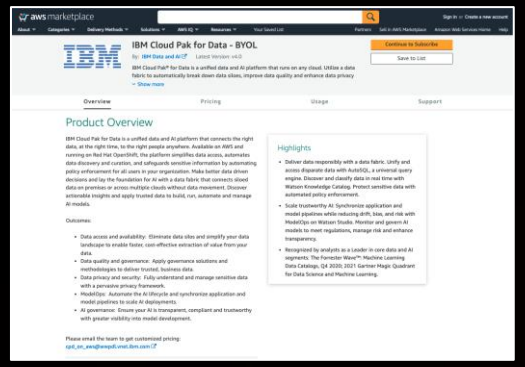
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IBM Software on Amazon Web Services

INDUSTRY LEADING SOFTWARE EMPOWERING CUSTOMERS WITH FAST, TURN-KEY DEPLOYMENT AT SCALE

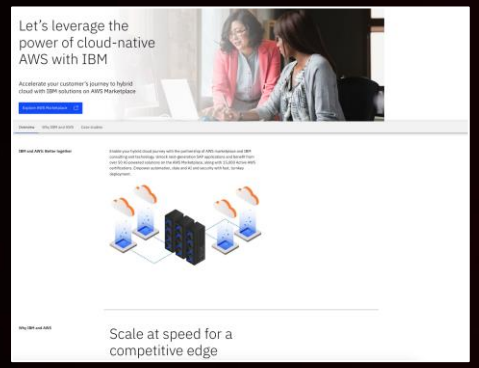
AWS Marketplace

- 50 AWS Marketplace Product Listings
- Paid, Bring your own License Options
- EDP Draw-down
- AWS Validated – FTR Compliant



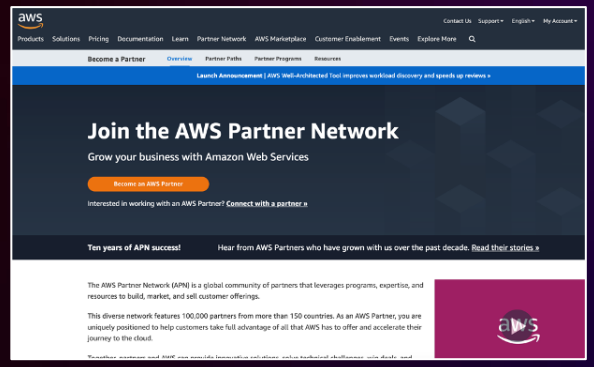
Integrated

- ROSA, OCP, and EC2 Deployment
- AWS Services Integrations
- AWS CloudFormation Enabled



Joint Investments

- Strategic Collaboration Agreement
- Jointly designed with IBM and AWS
- IBM and AWS Specialist Resources
- Product and GTM Joint Investments



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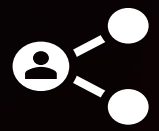
IBM Software as a Service on AWS

CLOUD-NATIVE SOFTWARE AS A SERVICE FULLY MANAGED BY IBM ON AWS



Fully Managed

- Fully Managed by IBM on AWS
- Frictionless Client Onboarding
- Offload Operations Management



Cloud-Native

- Secure by Design
- Built on AWS Native Services
- New Billing and Pricing Models



Innovative

- New Delivery Models and IBM IP
- Access New Features Easily
- Free Trials for Select Products

NEW SAAS ANNOUNCEMENTS TODAY

- NEW SAAS SOLUTIONS RECENTLY LAUNCHED
- NEW SAAS SOLUTIONS ANNOUNCED

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IBM Data and AI on AWS

UNLOCK THE POWER OF YOUR DATA

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IBM Data & AI on AWS

UNLOCK THE POWER OF YOUR DATA

Data Applications

Financial

Financial Crimes Insights

Oil & Gas

Open Data for Industries

Planning & Forecasting

Planning Analytics

Beta SaaS

Business Intelligence

Cognos Analytics

Chatbots

Watson Assistant

Speech

Watson Speech

Text & Search

Watson Discovery

Content

Watson Natural Language Understanding

Data Fabric

IBM Cloud Pak for Data

Data Integration

Watson Query


Data Replication

ETL

DataStage

Data Governance

Watson Knowledge Catalog

Entity Resolution

Match 360


Master Data Management

Trustworthy AI

OpenPages

Model Build & Deploy

Watson Studio


SPSS

Optimization

CPLEX

Data Store & Workload

Data Management

Db2


Db2 Warehouse


Netezza

High Performance Computing

Spectrum Symphony


Spectrum LSF

Large Model Support

Watson ML Accelerator

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Building a data and AI foundation



Integration

Automate data integration and engineering across multi-cloud and on premise



Governance

Automate data governance, quality, and security



Insights

Enable self-service data discovery, consumption, and collaboration

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Data fabric: Integrated with AWS



Services with connectors:

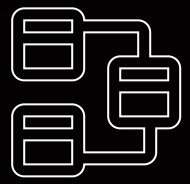
- **IBM Data Virtualization**
- **IBM Watson Knowledge Catalog**
- **IBM Watson Studio**
- **IBM DataStage**

IBM services have built-in or third party connectors to key AWS data sources

Connections can be leveraged by downstream offerings

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Data fabric on AWS: Expanded



Multi-cloud integration

Extend beyond native connections with JDBC/ODBC to connect to a wide array of AWS and third-party data sources

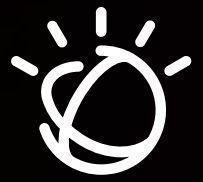


Governance and quality

Automatically discover and classify data from AWS sources as well as identify and mask PII

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We’re expanding IBM machine learning integrations with AWS SageMaker



Model fairness and trust

Watson Studio can monitor SageMaker deployments for fairness, drift, and explainability



Automatic model generation

High-performing models can be autogenerated in Watson Studio and exported as Jupyter notebooks for use in SageMaker

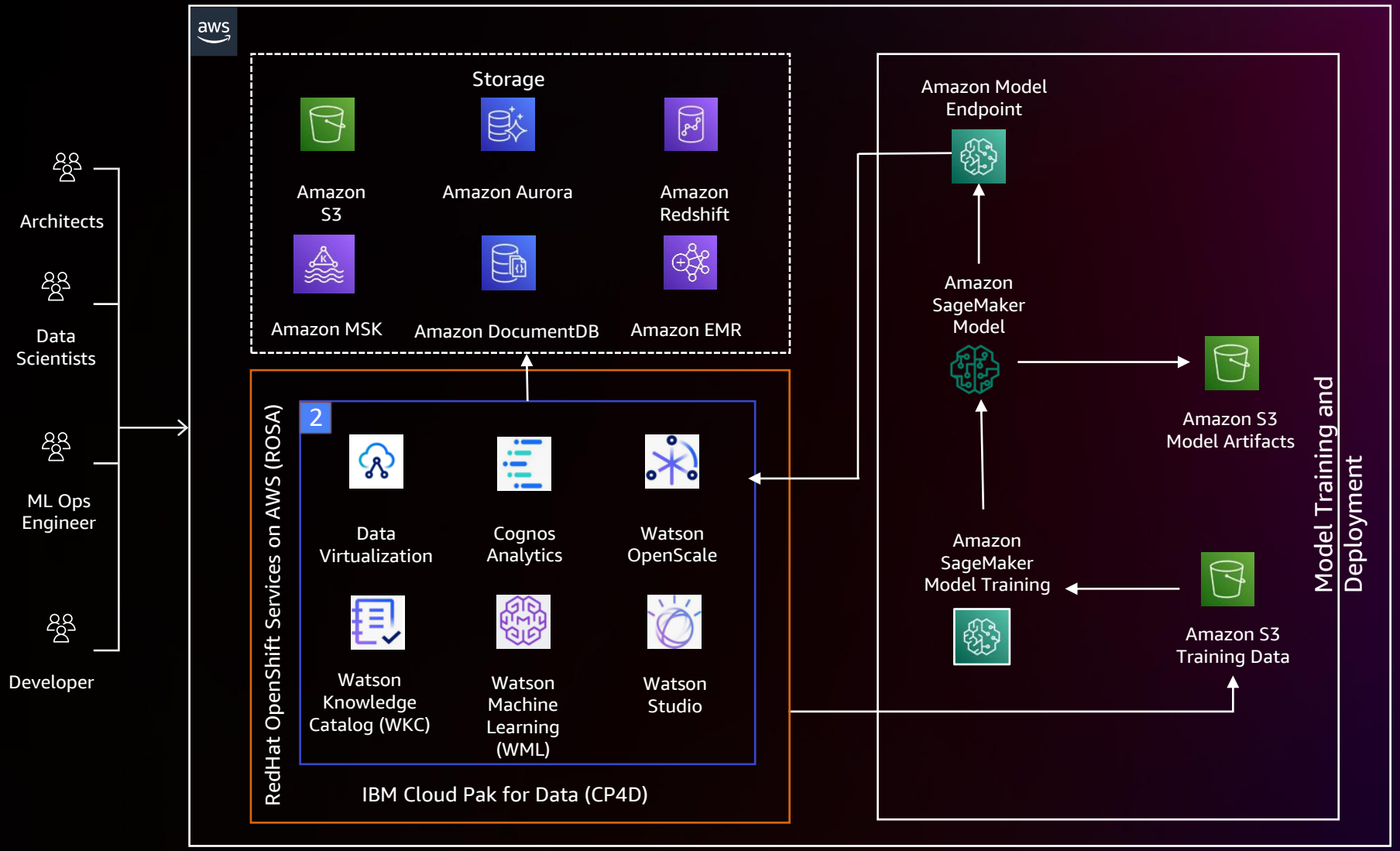
Attend the IBM Theater Session at the re:Invent Expo to learn more about IBM Data Fabric on AWS

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Example: IBM Cloud Pak for Data on AWS Reference Architecture

DEMONSTRATING DATA PROCESSING IN IBM CP4D AND MONITORING MACHINE LEARNING MODELS USING WATSON OPENSCALE DEPLOYED ON AMAZON SAGEMAKER



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Illumina



Genomics

Illumina shines new light on its sales and capacity forecasting with IBM Cloud Pak for Data

Blog Post & Video

Industry: Life Sciences
Geography: North America

Business challenge

- Genomics is highly dependent on data
- Industry trends and competitive information are not readily available
- They needed short-term and long-term sales forecasts and capacity plans that quickly adapt to their expanding markets

Solution

- Worked with IBM Data Science and AI Elite Team
  - Identify Forecasting Priorities to developer a POC with IBM Cloud Pak for Data
- Worked with IBM Consulting Services and Advanced Analytics Team
  - Develop AI/ML models to forecast global territories

Result

- Improved industry forecasting with accuracy, efficiency, and granularity across Illumina Software Portfolio

Outcome

- Improved shipment forecast accuracy by 19.7% using advanced analytics
- Fine-tuned customer segmentation and discovered data insights to guide their future data strategy
- Test environment deployed in less than 3 days

"The program has far exceeded my expectations."

Santosh Padmagirison
Senior Director, Commercial Finance and Advanced Analytics
Illumina

Solution components

- IBM Cloud Pak for Data on AWS with
  - IBM Data Virtualization
  - IBM Watson AutoAI
  - IBM Watson Studio
- IBM Cloud Pak for Data MLOps Starter Kit
- IBM Cloud Pak for Data Initiate Services from IBM's Expert Labs team
- Services from IBM's Data and AI Science Elite team

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IBM | Red Hat

Beta SaaS

IBM Planning Analytics SaaS on AWS

Planning and Forecasting



IBM Planning Analytics



IBM Planning Analytics

Planning Analytics Workspace



Visualize, analyze, and plan all from a web browser

Planning Analytics for Excel



Work where business users live

Planning Analytics Server



Model powerful data sources for multidimensional analysis

Attend the IBM Theater Session at the re:Invent Expo to learn more about IBM Planning Analytics SaaS on AWS

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IBM Automation on AWS

UNLEASH NEW LEVELS OF PERFORMANCE FASTER

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IBM Automation on AWS

UNLEASH NEW LEVELS OF PERFORMANCE FASTER

Integration

API Lifecycle Management



API Connect

NEW SaaS

High Speed File Transfer



Aspera

SaaS

Enterprise Messaging



MQ

Application Integration



App Connect

ANNOUNCE SaaS

Secure Application Gateway



Data Power Gateway

Kafka-based Event Streaming



Event Streams

Application Server



WebSphere Liberty

Amazon EKS, ECS, ROSA

Business Automation

Digital Workers



Watson Orchestrate

NEW SaaS

Content Management



Content Services

NEW SaaS

IT Automation

Observability



Instana

SaaS

Application Resource Management



Turbonomic

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NEW SaaS IBM API Connect

PUT API MANAGEMENT TO WORK IN YOUR BUSINESS WITH A FAST, ROBUST SOLUTION ON AWS



Create

Develop new APIs rapidly with the intuitive API Editor, thereby unlocking data, applications and services by using open standards

Manage

Package, publish, promote and reuse APIs across environments with full control throughout

Secure

Easily apply policies to provide protected access with a scalable enterprise-grade gateway

Socialize

Engage API consumers with self-service company branded portals and community-building features to expand brand reach

Monetize

Enable new revenue channels through free and billable monetization plans for your API consumers

---

IBM API Connect free trial

Try for free for 30 days

https://ibm.biz/APIC_trial_reinvent

AWS Marketplace

Purchase and provision from AWS Marketplace today

https://go.aws/3sJBozx

IBM Theater Session

Attend the Session for API Connect SaaS

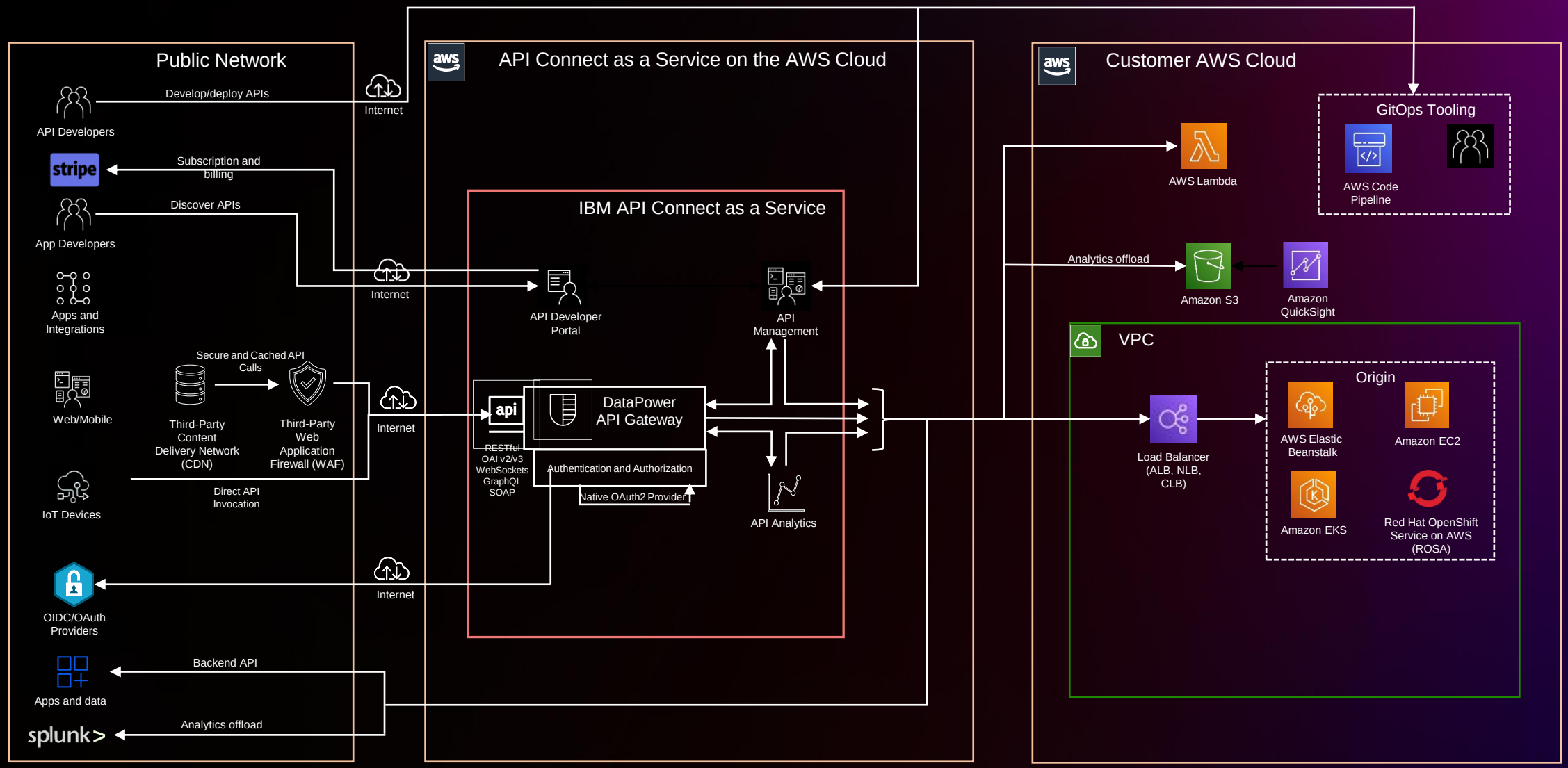
At the AWS re:Invent Expo

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Example: IBM API Connect as a Service on AWS Reference Architecture

DEMONSTRATING API MANAGEMENT WITH API CONNECT AS A SERVICE ON AWS



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IBM Security on AWS

MAKE YOUR CLOUD SECURE BY DESIGN

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IBM Security on AWS

MAKE YOUR CLOUD SECURE BY DESIGN

Extended detection and response

- Threat hunting — QRadar SIEM
- Orchestrate response — QRadar SOAR
- Endpoint security — ReaQta — New SaaS

Data security and compliance

- Data monitoring and compliance — Guardium Data Protection
- Data scanning and vulnerability detection — Guardium Vulnerability Assessment
- Automated compliance and risk detection — Guardium Insights

Identity and access management (IAM)

- Authentication and authorization — Verify SaaS — SaaS
- Access management and multifactor authentication — Verify Access

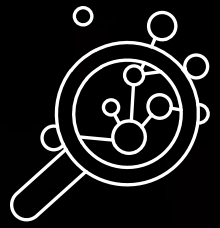
Fraud detection and protection

- Trusteer Pinpoint Detect — SaaS

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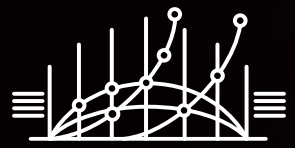
IBM Security QRadar SIEM on AWS

CENTRALIZED VISIBILITY AND INSIGHTS INTO THE MOST CRITICAL THREATS ACROSS AWS AND HYBRID ENVIRONMENTS



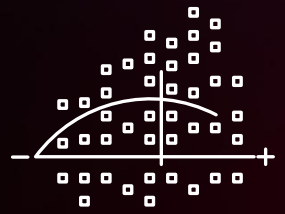
Insights across environments

Gain centralized visibility across AWS and hybrid cloud environments via a single pane of glass



Comprehensive insights

Utilize integrations with AWS services to ingest a broad spectrum of AWS logs and flows into QRadar SIEM for rapid and accurate threat detection



Real-time security analytics

Correlate data across users, networks, and AWS services to gain deep insights into key threats including cloud misconfigs, policy changes, and suspicious user activity



Prioritize threats

Connect related events to ensure streams only receive a single alert for an incident (for example, suspicious AWS logins to multiple Amazon EC2 instances to data exfiltration from Amazon S3 bucket)

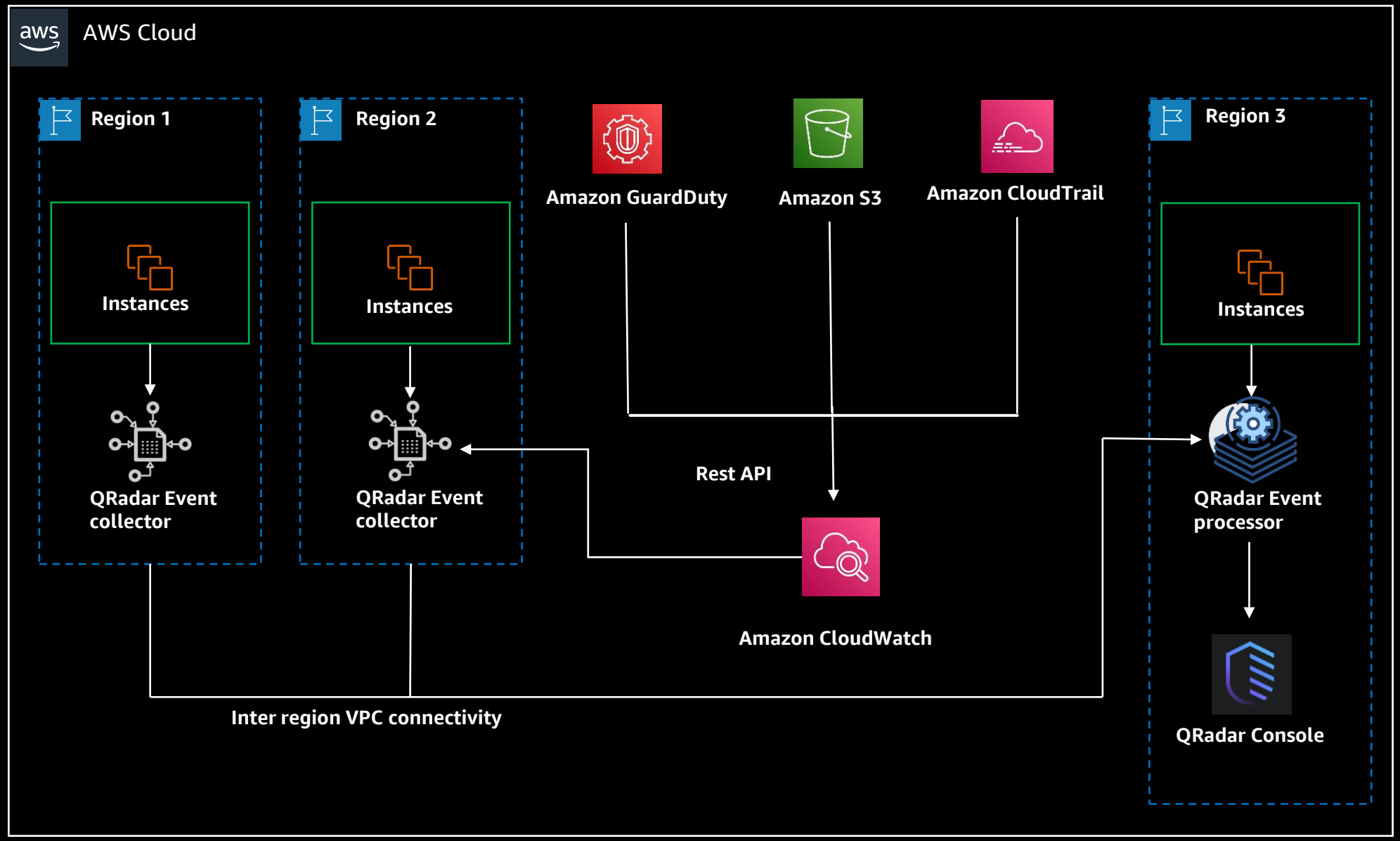
Incorporates AWS security sources including Amazon GuardDuty, AWS CloudTrail, AWS Network Firewall, AWS Security Hub, and more

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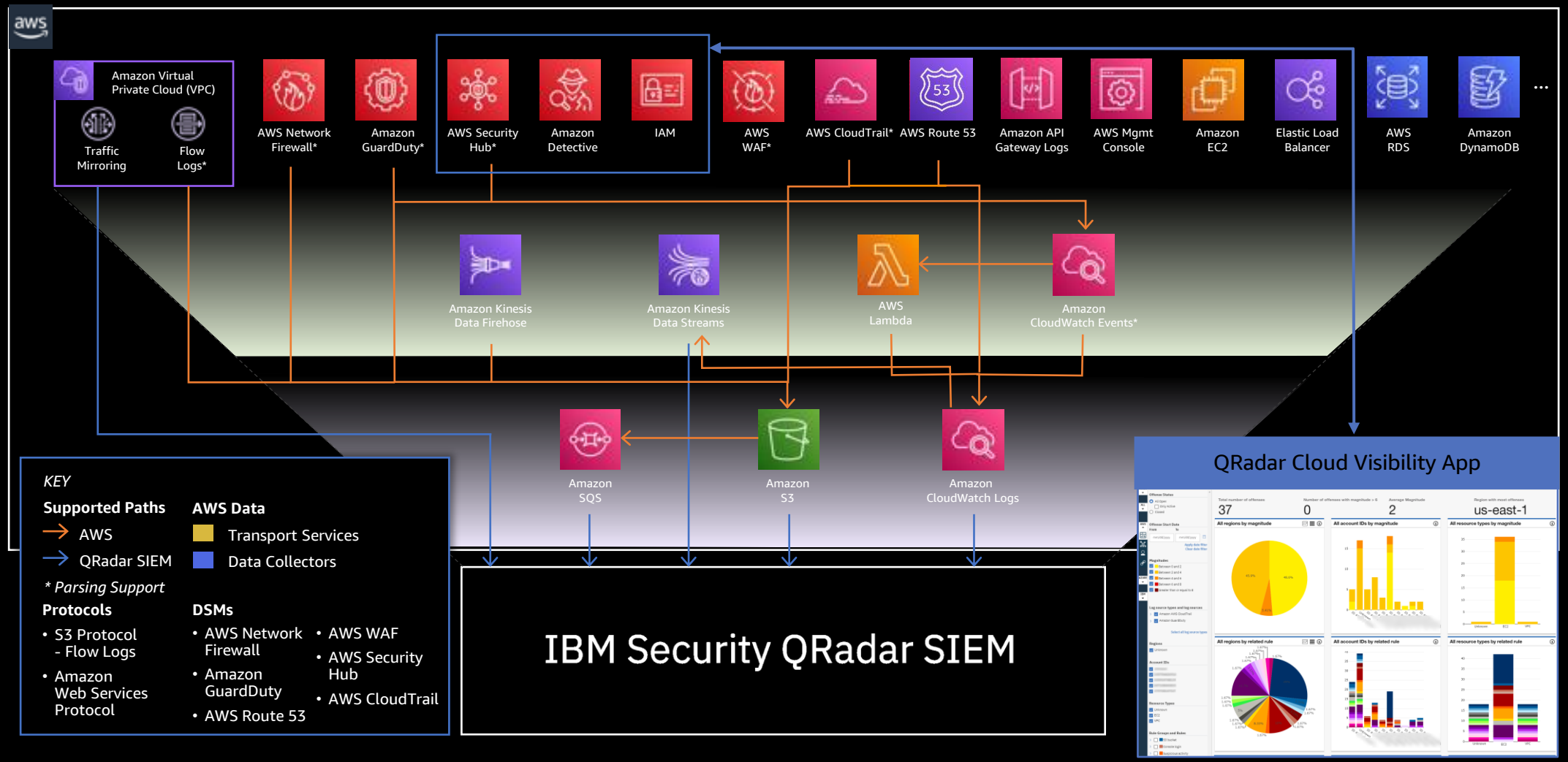
Example: IBM QRadar SIEM Reference Architecture on AWS

DEMONSTRATING IBM QRADAR SIEM CONSOLE, EVENT PROCESSORS AND EVENT COLLECTORS IN AWS MULTI-REGION



Example: IBM Security QRadar SIEM on AWS Reference Architecture

DEMONSTRATING THE EXTENT OF IBM SECURITY QRADAR SIEM VISIBILITY INTO AWS SERVICES



Attend the IBM Theater Session at the re:Invent Expo to learn more about IBM Security on AWS

Global MSSP offers flexible deployment models to accelerate clients' journey to AWS (ReliaQuest)



Industry
Cross-industry MSSP

Cloud environments
AWS

IBM solution
- QRadar SIEM
- AWS CloudTrail
- Amazon GuardDuty
- Amazon CloudWatch
- VPC flow logs
- Amazon CloudFront

Public reference at
https://ibm.co/3sO6OEE

Client requirements

A trusted IBM Security partner for over a decade, ReliaQuest has been at the forefront of providing customers with confidence in their security programs and investments so that they can thrive in the face of uncertainty. With deep expertise in IBM Security QRadar, ReliaQuest helps joint customers accelerate time to value by delivering increased visibility, automated threat detection and faster response.

As more organizations accelerate their move to cloud to drive business innovation and customer success, ReliaQuest continues to drive a unified approach to security for their clients, extending threat management capabilities across on-premises, hybrid, and multi-cloud environments. ReliaQuest has seen significant growth in hybrid cloud deployments of QRadar for a wide range of their cross-industry clients.

Solutions

By helping IBM Security QRadar customers integrate and correlate data from AWS, ReliaQuest delivers industry-leading visibility and robust threat coverage at every phase of the security lifecyle. A subset of the repeatable use cases include
- Misconfigured access policies (Public Access, Security Groups, etc.)
- Large data outflow (Amazon S3 bucket, VPC, etc.)
- Deletion of AWS objects (S3 buckets, configurations, instances, etc.)
- Rapid termination of production Amazon EC2 instances

Benefits

- Flexibility in deployment models to meet their clients' needs
- Deep visibility into the most critical concerns in AWS environments with a core set of repeatable use cases
- Combine AWS security event logs with flows to correlate disparate events into a single offense

Partner quote

"We're seeing organizations invest a significant amount of resources towards the cloud - whether it's a full cloud, multi-cloud or hybrid environment, the support we provide remains consistent across our customer base because of QRadar's flexible deployment models"

ReliaQuest

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IBM Sustainability on AWS

TURN SUSTAINABILITY AMBITION INTO ACTION

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Issues impacting today's field workforce

32% turnover

30% retiring

1.5x hiring cost

25% third-party techs

20% fail first fix

Complex and ever-evolving products require knowledge management



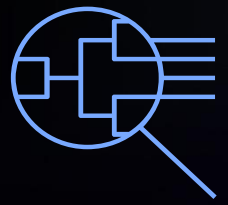
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The operating model change also applies to technicians



Equipment becoming more complex



Equipment remotely monitored



Experienced technicians retiring



Higher churn for newer technicians



Safety concerns increasing



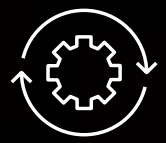
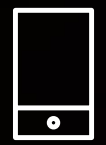
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NEW AWS

IBM Maximo Application Suite (MAS) on AWS

TURN SUSTAINABILITY AMBITION INTO ACTION

IBM Maximo Application Suite

Intelligent asset management	Technician work execution	Monitor and detect anomalies	360 view of assets	Predictive failures	AI-powered insights	Schedule work and resources	Prescriptive assistance
							
Manage	Mobile	Monitor	Health	Predict	Visual Inspection	Schedule	Assist

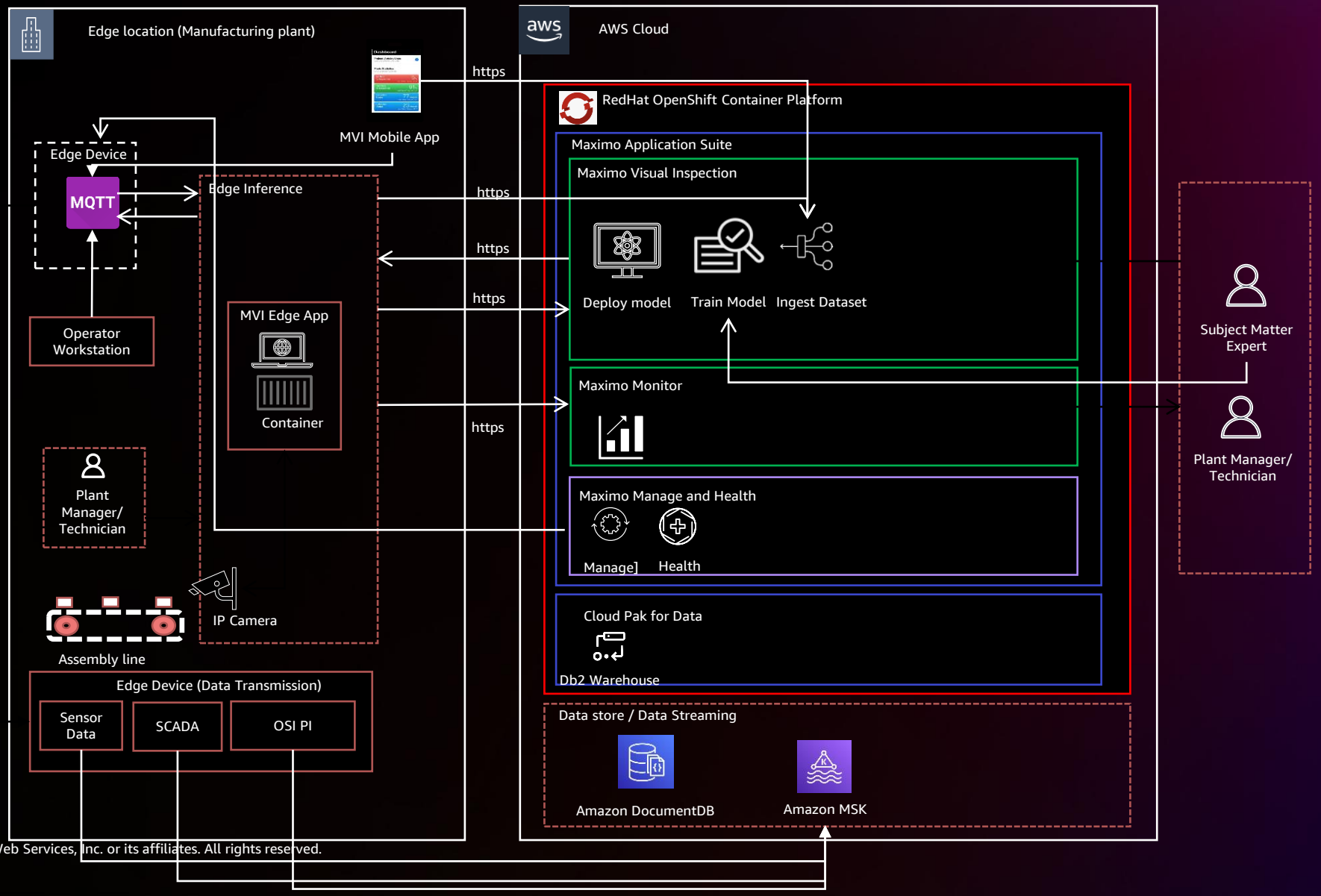
NEW SaaS

Attend the IBM Theater Session at the re:Invent Expo to learn more about IBM Maximo Application Suite on AWS

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Example: IBM MAS on AWS Reference Architecture

DEMONSTRATING COMPUTER VISION BASED ANOMALY DETECTION, AND ASSET MANAGEMENT USING IBM MAS MANAGE, HEALTH, AND VISUAL INSPECTION ON AWS



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NEW AWS

IBM Envizi: Next step in the IBM Sustainability portfolio

TURN SUSTAINABILITY AMBITION INTO ACTION

Build a data foundation and integrated system of record that delivers auditable, finance-grade ESG and sustainability data

Integrate internal and external stakeholders, process and technology to embed sustainability into daily operations

Streamline reporting to meet internal and external ESG and sustainability reporting requirements

Accelerate decarbonization by unlocking insights to inform the fastest and most cost-effective pathway to decarbonization

IBM Envizi Suite

NEW AWS (SaaS)

Emissions Management



Scope 1, 2 GHG Accounting + Reporting



Scope 3 GHG Accounting + Reporting



Target Setting + Tracking

ESG Reporting



ESG Reporting Frameworks



Building Ratings + Benchmarks



Value Chain Surveys + Assessments

Decarbonization



Utility Bill Analytics



Sustainability Program Tracking



Interval Meter Analytics

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IBM Modernization on AWS

MODERNIZE TO FUEL GROWTH AND INNOVATION

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Mainframes remain central to accelerating digital transformations of businesses

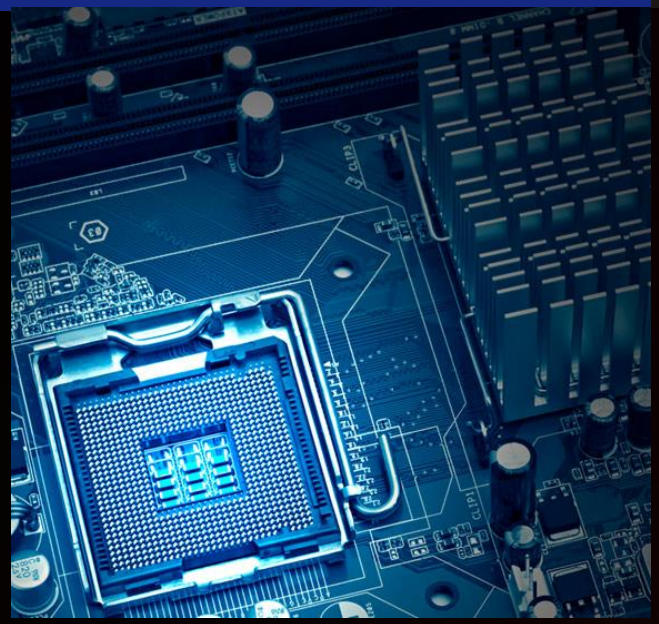


71%

executives say mainframe-based applications are central to their business strategy

2x

percentage of organizations leveraging mainframe assets in a hybrid cloud environment expected to increase in 3 years' time



4 of 5

say organizations need to rapidly transform to keep up with competition, including modernizing mainframe-based applications and adopting a more open approach



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IBM

Benefits of Mainframe Modernization



- Embraced Cloud-Native Development Standards, Languages, and Tools



- Innovate rapidly in-place without significant re-architecture



- Limited investments, resources, or project risks for modernization efforts



- Continue to leverage compliance certifications and accreditations in data-center(s)



- Optimal latency performance with close proximity of app to data on mainframe

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Modernize mainframe applications for hybrid cloud with IBM and AWS

1. Cloud-native experience for z/OS applications
2. Real-time sharing between z/OS applications and AWS
3. Mainframe augmentation with new channels
4. Hybrid storage with AWS cloud storage
5. Enterprise automation across z/OS and AWS



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https://aws.amazon.com/blogs/apn/modernize-mainframe-applications-for-hybrid-cloud-with-ibm-and-aws

https://community.ibm.com/community/user/ibmz-and-linuxone/blogs/skyla-loomis/2022/05/09/modernize-for-hybrid-cloud-with-ibm-and-aws

NEW AWS IBM Z and Cloud Modernization Stack

MODERNIZE TO FUEL GROWTH AND INNOVATION

IBM Z and Cloud Modernization Stack

Mainframe augmentation with new channels

Create secure APIs for z/OS in minutes



z/OS Connect

Cloud-native development for z/OS applications

Dev/Test z/OS applications in sandbox



Wazi Sandbox

Edit, build, debug z/OS applications



Wazi Code

Rapid application analysis



Wazi Analyze

Enterprise automation across z/OS and AWS

Automate provisioning of z/OS resources



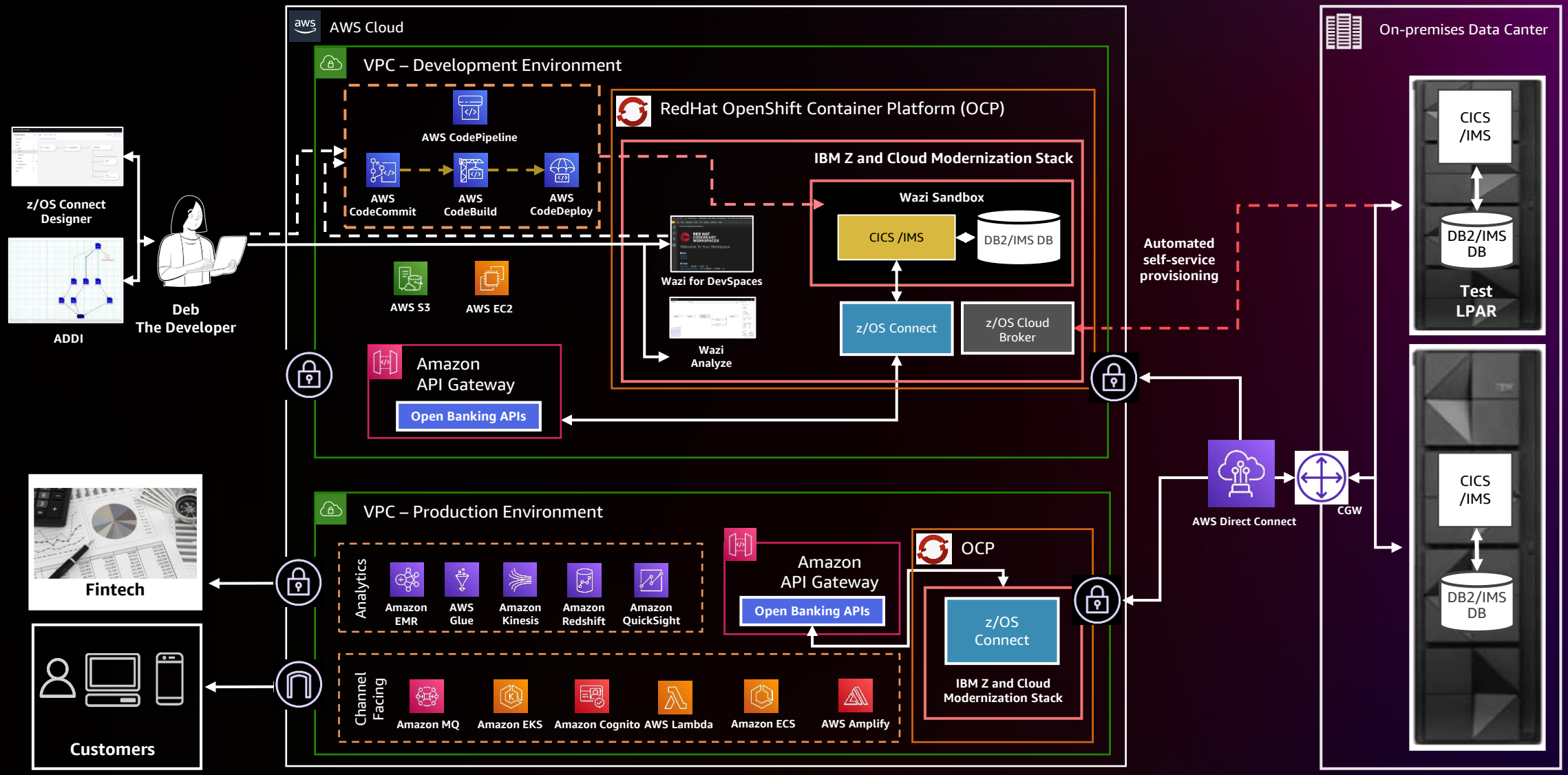
z/OS Cloud Broker

Attend the IBM Theater Session at the re:Invent Expo to learn more about IBM Z and Cloud Modernization Stack on AWS

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Example: IBM Z Cloud and Modernization Stack on AWS Reference Architecture

DEMONSTRATING OPEN BANKING USING DIGITAL AUGMENTATION WITH NEW CHANNELS AND CLOUD-NATIVE DEVELOPMENT ON AWS WITH IBM Z ON-PREMISES



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Customer success story

An American Bank



Challenges

The bank wanted to build and deploy digital solutions (mobile and web apps) using Java, Node, Swift and GoLang that securely connect to existing mainframe applications and data.

Needed common tools that **don't require mainframe skills** to implement the integrations.



Solution

Using the z/OS Connect capabilities, available in IBM Z® and Cloud Modernization Stack, now available on AWS-**marketplace, developers can create secure, fully RESTful z/OS APIs** using OpenAPI standards to interact with mainframe data and resources.



Outcome

- **Greater operational effectiveness** for developers to create no code APIs in minutes versus days and weeks
- Enabled AWS applications to **securely interact with mainframe applications and data**
- **Minimized changes** to existing mainframe applications

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IBM Storage Software on AWS

MODERNIZE TO FUEL GROWTH AND INNOVATION

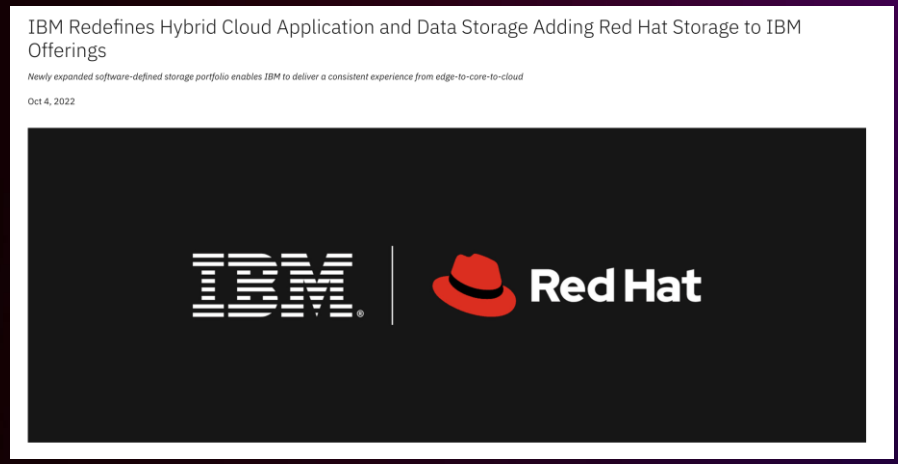
Global data platform

Spectrum Scale

Data migration

Spectrum Virtualize

New IBM and Red Hat products coming soon to AWS



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Closing thoughts

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Extending IBM's ecosystem through AWS

LET'S CREATE NEW WAYS FOR BUSINESS TO DO BUSINESS



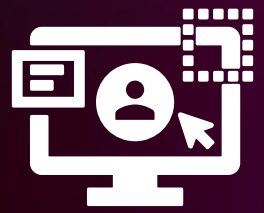
AWS Channel Partners

- Expanded resellers channels and markets to support AWS customers
- IBM is AWS Marketplace Consulting Partner Private Offer (CPPO) Enabled



Global System Integrators (GSIs)

- Services led migration and digital transformation with IBM Software and Industry Solutions
- Industry Solutions powered by IBM Software on AWS



Independent Software Vendors (ISVs)

- Build on, and embed IBM and Red Hat
- Embeddable AI NLP Offerings
- IBM Build and GTM for Build on AWS
- IBM Agreements and Investments

Attend the IBM Theater Session at the re:Invent Expo to learn more about the IBM ISV Programs

aws

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Getting started at AWS re:Invent

Booth presence
IBM #3235
Red Hat #624
Instana #616

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- Ask our IBM Experts for a product demo at the IBM booth
- Schedule a meeting with our IBM executives and specialists
- Navigate to the AWS Marketplace to view our product listings
- Navigate to IBM Developer IBM AWS Site for Deep Content
- Please complete the session survey

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